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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,388	03/28/2005	Sukyoung Chun	1003-1001	6736
466	7590	12/28/2007	EXAMINER	
YOUNG & THOMPSON			SULLIVAN, DANIELLE D	
745 SOUTH 23RD STREET			ART UNIT	PAPER NUMBER
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ARLINGTON, VA 22202			MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/529,388	CHUN, SUKYOUNG
	Examiner	Art Unit
	Danielle Sullivan	1616

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 09 November 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
 - 4a) Of the above claim(s) 1-8 and 10 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 9 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 March 2005 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/28/2005.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group IV, claim 9 in the reply filed on 11/09/2007 is acknowledged.

Claims 1-10 are pending. Claims 1-8 and 10 are withdrawn from consideration as being drawn to non-elected subject matter. Claim 9 is presented for examination on the merits as it reads on the elected subject matter.

The restriction requirement was deemed proper and hereby made **FINAL**.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 9 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

The term "a using method for the wood chip" is an indefinite term because the statement does not make sense. There is insufficient antecedent basis for this limitation in the claim because there is no prior reference to "the wood chip". In English it is improper to refer to "a using method". The term should read "a method of using a wood chip".

Also the term "drying naturally to 10-40% water content" is not clearly defined within the specification. Therefore, there is no way of determining how the wood capsule is "naturally" dried. Is it dried by being exposed to the sun or by air? Herein the term "drying naturally" will be given its broadest reasonable interpretation, meaning any drying means used in the art. The fact that "10-40% water content" is dried is not clear. Is the 10-40% relative to the volume of water within an individual capsule or is water content being interpreted as the moisture content of any liquid present in the capsule. How is this range determined?

The term "mixing at different rates according to the uses and applying the wood chip capsule produced said step (c)" is indefinite. There is insufficient basis for the "wood chip capsule" since prior reference is only to a "wood chip" from step (a). Also the statement should be rephrased to make the statement conform to proper English. The statement should read "mixing at different rates ... and applying the wood chip produced in step (c)".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Renwick (US 3,034,882). in view of Reeb (Drying Wood, 1999).

Applicant's Invention

Applicant claims a method of using a wood chip by:

- a) manufacturing a wood chip;
- b) drying the wood chip to 10-40% water content;
- c) permeating more than one of a fertilizer, pesticide or plant growth regulator into the wood chip by a pressurized or immersion method;
- d) mixing different kinds of wood according to crops or diseases and insects.

Determination of the scope and the content of the prior art

(MPEP 2141.01)

Renwick teaches a method of treating wood chips with organic fertilizers, compounds of nitrogen, phosphorus, potash or other plant nutrients may be combined by impregnating the wood chip with the chemicals (column 1, lines 8-29). The fertilizer impregnated wood may be encased (encapsulated) in a soluble coating which slows down the breakdown due to weathering, water and time (column 2, lines 9-13). The wood chips are first manufactured from logs, lumber, etc. (step a)) (column 2, lines 26-28). The wood chips are thoroughly dried by the extraction of all moisture by heating the chips in a roaster, oven or drier (step b)), however, Renwick teaches that in some instances it may be desirable to drive off only the free water, which leaves the cell walls saturated (column 2, lines 57-72). While wood chips are still hot they are ready to be impregnated with the desired chemicals (step c)) (column 3, lines 1-5). Forced evacuation and impregnating under pressure (pressurized) provides more ideal product (column 3, lines 35-37). However, other means can be used such as placing chip in a rotating drum and immersing the hot chips in cold solution (column 3, line 66 thru column 4, line 4). There is not limitation on a particular species of wood useable (column 2, lines 26-27).

Reeb teaches that when air drying wood the final moisture content is determined by ambient air temperature, relative humidity and drying time. Air drying wood can bring the MC (moisture content) down to a range of 20 to 30% depending on outside

conditions, lumber species, size and may take up to a year or more (paragraph 9, pages 4-5).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Renwick does not teach drying the wood chip to 10-40% water content; instead the wood chips are dried completely.

Finding of *prima facie* obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Renwick and Reeb to further include the step of drying naturally to 10-40% water content. One would have been motivated to include air drying the wood chips because heating would require the use of extra energy which is of primary concern in view of energy conservation and maintaining this moisture content would aid in the adhesion of other substrates. One of ordinary skill would have easily arrived at the invention in view of the prior art by air drying when no external energy source is available.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sandberg (2,905,240) and Held (5,125,812).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danielle Sullivan whose telephone number is (571) 270-3285. The examiner can normally be reached on 7:30 AM - 5:00 PM Mon-Thur EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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